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**Waste Management and Research Center**

## **Statewide Inventory of Land-Based Disposal Sites: FY'88 Update**

**Edward Mehnert,  
Mary J. Mushrush**

**Illinois State Geological Survey**

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**HWRIC RR-041**

## **Statewide Inventory of Land-Based Disposal Sites: FY '88 Update**

by

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**Printed November 1991**



Illinois Department of Energy and Natural Resources

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FY '88 Update**

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Prepared for

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## CONTENTS

	Page
ACKNOWLEDGMENTS...	iii
TABLES.....	vi
FIGURES.....	vii
ABSTRACT.....	viii -
CHAPTER 1. INTRODUCTION.....	1
Background.....	1
Development of the Inventory.....	2
Purpose and Scope.....	4
CHAPTER 2. TASKS...	7
Updating the Inventory.....	7
Calculation of XY Coordinates.....	12
Distribution of Information....	13
CHAPTER 3. STATUS OF THE INVENTORY.....	15
CHAPTER 4. FUTURE NEEDS.....	33
REFERENCES.....	35



## TABLES

	Page
1. Data provided by NIPC on a county basis.	9
2. Items in the landfill file of the Inventory updated with information from various sources.	10
3. Distribution of information from the Inventory.	13
4. Tabulation of data from the landfill file of the Inventory as of January 12, 1989.	16
5. Summary of data from the landfill file of the Inventory as of January 12, 1989.	19
6. Number of records in the landfill file of the Inventory on an item-by-item basis for FY'87 and FY'88.	20

## FIGURES

	Page
1 Example of printout from the landfill file.	3
2 All known waste disposal sites.	23
3. Land burial disposal sites.	24
4 Surface impoundments used for waste disposal	25
5 Disposal sites where land application of wastes was conducted.	26
6 Disposal sites with hazardous wastes.	27
7. Radioactive waste disposal sites.	28
8. Active disposal sites.	29
9 Remedial action disposal sites.	30
10. Sites that conducted hazardous waste disposal activities and notified USEPA under RCRA Part A	31

## ABSTRACT

Selected portions of the previously developed Statewide Inventory of Land-Based Disposal Sites were updated. The Inventory is a computerized database of all documented land-based disposal sites in Illinois which includes landfills, surface impoundments, land application sites, and open dumps. Data compilation began in 1984 and has continued during this project period. For each site, data regarding site identification, location, type of disposal, source and type of waste, source of data, regulatory information, and other information have been compiled.

The Inventory currently comprises three files-- the landfill file (3406 records), delisted sites file (4 records), and surface impoundment file (5064). The landfill file includes all known land-based disposal sites. Updating this file has been the focus of this project. The delisted sites file contains sites from which all waste has been removed. The surface impoundment file is a reformatted version of a 1980 inventory compiled by the Illinois Environmental Protection Agency (IEPA). Neither the delisted sites files nor the surface impoundment file were updated during this project period.

The landfill file of the Inventory was updated with information provided by IEPA and the Northeastern Illinois Planning Commission. These sources also provided data for additional land-based disposal sites. Data for these sites were added to the landfill file, increasing the number of sites from 2943 to 3406. New data were added to the landfill file to improve the quality and utility of the database. To obtain information from the Inventory, contact the Hazardous Waste Research and Information Center or the Illinois State Geological Survey

Four reports have been published describing the development and updating of the Inventory: Statewide Landfill Inventory Interim Report (Dixon, 1985), Statewide Landfill Inventory Progress Report (Dixon and Hensel, 1985), The Development of the Illinois Statewide Inventory of Land-Based Disposal Sites (Dixon et al., 1986), and Statewide Inventory of Land-Based Disposal Sites: An Update (Mehnert and Keefer, 1988). Dixon et al. (1986) offer the most complete description of the development of the Inventory. Mehnert and Keefer (1988) and this report describe the updating process. This report draws liberally from the four previous reports.

## CHAPTER 1. INTRODUCTION

### Background

The Statewide Inventory of Land-Based Disposal Sites is a computerized database of all known land-based disposal sites in Illinois. Land-based disposal sites include landfills, land application sites, open dumps, surface impoundments, and any other site where land is the final repository for waste. In addition, the Inventory contains information about currently operating waste disposal sites, as well as former disposal sites which are now closed.

The Inventory is organized in three separate files: the landfill file (3406 sites), "delisted" sites file (4 sites), and surface impoundment file (5064 sites). The landfill file includes all known land-based disposal sites, including impoundments used for disposal of liquids. The delisted sites file contains sites formerly listed in the landfill file, where all waste has been removed. The surface impoundment file is a reformatted version of the 1980 inventory of surface impoundments compiled by the Illinois Environmental Protection Agency (IEPA) and contains data for impoundments used for disposal, storage, and/or treatment of liquids. Many of the impoundments were used to impound oil-field brines. Only those impoundments listed as "disposal" impoundments are listed in the landfill file.

The information in the Inventory may be categorized into the

following groups: site identification, location, owner/operator and site size, source of data, type of disposal, location of hydrogeologic information, source and type of waste, regulatory information, and miscellaneous information. Figure 1 is an example of a printout of one record from the landfill file of the Inventory. Note that this printout was designed to provide a one page summary of a record in the Inventory. Thus, it does not contain all items for a record, only those items frequently requested.

Currently, information contained in the Inventory is accessible only by requesting information from the authors at the Illinois State Geological Survey (ISGS) or from the Hazardous Waste Research and Information Center (HWRIC).

#### Development of the Inventory

HWRIC has funded the development and updating of the Inventory through its research program. One goal of the HWRIC research program is to characterize and assess the problems posed by hazardous waste generation and disposal in Illinois. To achieve this goal, the magnitude of the disposal problem must first be quantified. Land-based disposal has been a common technique for hazardous waste disposal in the past and remains so today. Therefore, as a first step to evaluate the significance of this disposal option in the overall context of waste management, land-based disposal sites in Illinois were inventoried.

Development of the Inventory began in December 1984 and has continued

Figure 1 Example of printout from the landfill file

```

                                LANDFILL INVENTORY                                10/16/1989
A  IEPA NO    198090001          RECORD  181
   PROVISIONAL NO  0              SITE NAME: CHAMPAIGN MUNICIPAL

B  LOCATION:
   COUNTY: CHAMPAIGN              CITY/TOWNSHIP: CHAMPAIGN
   LATITUDE: 400935    LEGAL: SWE    SEC.28  T 20N  R.08E    3 PM
   LONGITUDE: 881825    LAMBERT-FEET:X 3331700    Y 2598631

C  OWNER: CITY OF CHAMPAIGN          LANDFILL SIZE
   OPERATOR: CITY OF CHAMPAIGN      IN ACRES:    85

D  SOURCES OF DATA:
    1) IEPA                X          5) DPH
    2) ISGS                6) LOCAL HD
    3) PCB                 7) OTHER AGENCY    X PLANNING COMM
    4) IDM&M              8) OTHER

E  TYPE OF DISPOSAL: C
    A) OPEN DUMP            D) INCINERATION
    B) SECURED CONTAINERS   E) SURFACE IMPOUNDMENT
    C) LANDFILL            F) LAND APPLIC.

F  HYDROGEOLOGIC REPORT AT: (P=PRELIMINARY, D=DETAILED, PD, NO)
    1) HWRIC NO  2) IEPA PD  3) ISGS P  4) OTHER NO

G  SOURCE(S) AND TYPES OF WASTE:
    1) HAZARDOUS WASTE      11) ANIMAL WASTE
    2) HAZARDOUS LIQUIDS    12) PATHOLOGICAL WASTE
    3) NONHAZARDOUS WASTE  X  13) FOUNDRY SAND
    4) SPECIAL              14) SLAG
    5) RADIOACTIVE WASTE    15) INCINERATOR ASH
    6) GENERAL SOLID WASTE  16) DEMOLITION DEBRIS
    7) INDUSTRIAL WASTE     17) CONCRETE/ASPHALT
    8) OIL FIELD BRINE      18) LANDSCAPING WASTE
    9) MUNI SEWAGE SLUDGE   19) OTHER
   10) SEPTIC SLUDGE        20) UNKNOWN

H  BACKGROUND DATA: (Y=YES, N=NO)
    1) STATUS: CLOSED NO FINAL COVER      7) RCRA SITE:
    2) PERMIT STATUS: PERMITTED            8) FORMER DISPOSAL SITE:
    3) DATE PERMITTED: 10165              9) ILLEGAL SITE:
    4) DATE OPENED:    0                  10) DATE DISCOVERED:    0
    5) DATE CLOSED:    0                  11) DATE CLEANED:    0
    6) REMEDIAL SITE    12) GW MONITORING: YES
    COMMENTS: PC: CHANGED LEGAL DESC AND SIZE FROM 15 TO 90

I  MISCELLANEOUS INFORMATION: (ON FILE AT)
    1) PREVIOUS STUDIES:
    2) SITE PLANS: IEPA
    3) OPERATION RECORDS:
    4) MONITORING DATA: IEPA
    5) OTHER RECORDS: IEPA(BORE LOGS)
    6) LEGAL ACTIONS:
    7) IMPOUNDMENT INVENTORY RECORD:
```

through the current project, Statewide Inventory of Land-Based Disposal Sites: FY'88 Update. During FY'85 and FY'86, the primary purpose was to identify sources of pertinent information and to collect and organize the mass quantities of data into a workable format. During FY'87 and FY'88, efforts have been concentrated on updating and improving the data contained in the Inventory. See the reports listed below for additional information.

Four reports have been published describing the development and updating of the Inventory: Statewide Landfill Inventory Interim Report (Dixon, 1985), Statewide Landfill Inventory Progress Report (Dixon and Hensel, 1985), The Development of the Illinois Statewide Inventory of Land-Based Disposal Sites (Dixon et al., 1986), and Statewide Inventory of Land-Based Disposal Sites: An Update (Mehnert and Keefer, 1988).

Dixon et al. (1986) offer the most complete description of the development of the Inventory. Mehnert and Keefer (1988) and this report describe the updating process. This report draws liberally from the four previous reports.

#### **Purpose and Scope**

The primary purpose of the current project was to update data in the landfill file of the Inventory with more recent data from the Illinois Environmental Protection Agency (IEPA) and the Northeastern Illinois Planning Commission (NIPC). Sites were to be added to the delisted sites file as necessary, but data for sites in that file were not updated. The data for sites in the surface impoundment file were not

updated because compilation of this file was a one-time effort by IEPA

Another purpose of this project was to distribute data contained in the Inventory, primarily by responding to requests for information. Details of the information dissemination process are discussed in Chapter 2.





## CHAPTER 2. TASKS

Two tasks of this project were updating data and distributing data in the Inventory. The data used and details of the updating process are discussed first.

### Updating the Inventory

A major source of data for updating the landfill file was the comprehensive list of special waste handlers from IEPA. The list identifies special waste handlers by type of activity (generator, transporter, landfill, etc.) and is updated annually by IEPA. Records for four types of activities were used for updating the landfill file: landfills, disposal surface impoundments, land application sites, and illegal sites. Two types of surface impoundments, storage and disposal, are identified in IEPA's special waste handlers list. Only the latter (disposal) was used for updating. In addition, illegal sites are categorized by IEPA as follows: random dumps, open dumps, abandoned sites, or other. All four categories were used for updating. During the previous update of the Inventory, only records for landfills from IEPA's special waste handlers list were used. Thus, data used for updating in this project period are more comprehensive than the data used for previous updates.

IEPA also provided data to update remedial action sites, including sites on the following federal and state clean-up lists: the National Priority List (NPL), proposed NPL, State Remedial Action Priority List

(SRAPL), and Immediate Hazardous Waste Removal Projects (IHWRP). Data were obtained from the January 5, 1989 edition of the Hazardous Waste Monthly Update Reports (Commean, 1989). Commean (1989) summarizes clean-up activities at a wide variety of sites including waste disposal sites. From that report, only data for sites identified as land-based waste disposal sites were used to update the landfill file of the Inventory. Additional data for updating sanitary landfills were obtained from IEPA's report, Available Disposal Capacity for Solid Waste in Illinois (IEPA, 1987).

The Northeastern Illinois Planning Commission (NIPC) supplied data for Cook, DuPage, Kane, Lake, McHenry, and Will counties. Under a grant from the Joyce Foundation, NIPC surveyed various government agencies, historical societies, etc. and searched publications, documents, and maps to locate historical disposal sites-- landfills, open dumps, etc. (Schaefer and Comm, 1988). This information was used for updating the landfill file. In addition, NIPC verified the locational information for sites in the six county area that were listed in the landfill file

The following conventions were used during the updating process. First, data supplied by sources other than IEPA (for example, NIPC or a county agency) were not updated with data from IEPA. Since these sources often were personally familiar with the disposal sites, their data were considered to be more accurate than data in the special waste handlers list. In addition, data from the most recent version of the special waste handlers list were assumed to be more accurate than previous versions of that list. Due to high travel costs, field

checking of any data was not conducted during the development or updating of the Inventory.

In Table 1, the distribution of NIPC data by county is given. "Items updated" indicates the number of items updated for existing records. (Each record, which represents one site, currently has 84 items.) "New sites" indicates the number of new records added to the landfill file of the Inventory.

Table 2 shows the items from the landfill file of the Inventory which were updated with the special waste handlers list and NIPC data. All items were updated for new sites from the special waste handlers list added to the landfill file of the Inventory. Data provided by NIPC were limited to name of site, location of site, source of data, and type of disposal

One item, "CERCLA", was renamed to "remedial". The new name is more accurate because the item "remedial" designates whether the site is

---

TABLE 1. Data provided by NIPC on a county basis.

<u>COUNTY</u>	<u>ITEMS</u> <u>UPDATED</u>	<u>NEW</u> <u>SITES</u>
Cook	274	156
DuPage	99	17
Kane	100	21
Lake	294	43
McHenry	125	16
Will	<u>154</u>	<u>35</u>
TOTAL	1,046	288

---

TABLE 2. Items in the landfill file of the Inventory updated with information from various sources.

	SOURCE				
	IEPA special waste handlers list				
ITEM	Landfill	Impound	Land Ap.	Illegal	NIPC
IEPA Number	X	X	X	X	
USEPA Number	X	X	X	X	
Site Name					X
Provisional Number					
County					
City					
Latitude	X	X	X	X	
Longitude	X	X	X	X	
Principal Meridian	X	X	X	X	X
Township	X	X	X	X	X
Range	X	X	X	X	X
Section	X	X	X	X	X
Quarter Section 1	X	X	X	X	X
Quarter Section 2	X	X	X	X	X
Quarter Section 3	X	X	X	X	
Quarter Section 4	X	X	X	X	
X	1	1	1	1	1
Y	1	1	1	1	1
Owner					
Operator					
Size	X	X	X	X	
Source of Data	X	X	X	X	X
Type of Disposal	X	X	X	X	X
Hydrogeologic Report					
Type of Waste	X	X	X	X	
Operating Status	X	X	X		
Permit Status	X	X	X		
Date Permitted					
Date Opened					
Date Closed					
Remedial Site					
RCRA Site					
Groundwater Monitoring	X	X	X		
Former Disposal Site					
Illegal Site				X	
Date Discovered				X	
Date Cleaned				X	
Comment Line 1				X	
Comment Line 2				X	
Availability of Reports					
Leachate Collection	X	X	X		
Liner Material	X	X			
Offsite Waste Accepted	X	X	X		

continued on next page

TABLE 2. Continued

	SOURCE				
	IEPA special waste handlers list				
<u>ITEM</u>	<u>Landfill</u>	<u>Impound</u>	<u>Land Ap.</u>	<u>Illegal</u>	<u>NIPC</u>
Size of Fill	X			X	
Record Number	X	X	X	X	
Last Update	X	X	X	X	X
Relate	X	X	X	X	X
Map	X	X	X	X	X
Sanitary	X	X	X	X	
Illegal Type				X	

Notes: 1) Values were recalculated.

undergoing or is scheduled to undergo remedial action under the federal (CERCLA) or state (SRAPL, IHWRP, or Voluntary) remedial action programs.

Five new items were added to the landfill file to improve its utility-- last update, relate, map, sanitary, and illegal type. "Last update" was added to the Inventory to provide users with information regarding the source of information and how recently the data for that record were updated. The item "relate" is an eleven character field-- the first ten characters are the site IEPA number and the last field contains a code denoting the type of disposal or activity. This item is primarily useful for updating the Inventory, allowing sites with multiple types of disposal to be more easily updated. The item "map" was added to indicate the type of data used to compute XY (Lambert) coordinates. This item is most commonly encoded as "LL" denoting that latitude-longitude coordinates were used to map the site or "leg" denoting that a legal description was used. For XY coordinates based on legal description the user can look at the legal description (township, range, section, quarter section, etc.) to determine the accuracy with

which the XY coordinates were computed. Also, if the user doubts the accuracy of the mapped location, the location may be verified if the alternate location description is available. The item "sanitary" was used to indicate sanitary landfills, landfills permitted by IEPA to dispose of general solid waste. Sanitary landfills were updated with information provided in IEPA (1987). Use of this item allows distinguishing landfills permitted to accept general solid waste from landfills permitted to accept special waste. The last item "illegal type" is used in conjunction with the item "illegal" and identifies four types of illegal sites which were discussed previously.

#### **Calculation of XY Coordinates**

After updating the Inventory with the special waste handlers list and NIPC data, XY (Lambert) coordinates for each site were recalculated. XY coordinates, which are used for plotting with a geographic information system (GIS), were calculated based on latitude-longitude or legal description, depending on the completeness of the legal description. A legal description complete to the fourth quarter section is more accurate than latitude-longitude to the nearest second. Accordingly, if the legal description was complete to the fourth quarter section, XY was calculated using this legal description. Otherwise, the XY calculation was based on latitude-longitude data. As noted above, the data item "map" denotes the data source used to compute the XY coordinates. For sites with no latitude-longitude data or legal description, XY coordinates cannot be calculated. In most instances, ancillary data were not sufficient to accurately determine XY coordinates for these

sites. Thus, these sites currently cannot be plotted.

#### Distribution of Information

Both the ISGS and HWRIC distribute information from and about the Inventory as requested. Table 3 gives the type and number of requests the ISGS and HWRIC have responded to during the past year. Requests for data from the Inventory generally have been for large printouts of data regarding a certain type of site or sites within an area. Requests for general information typically concern the type of data available or clarification of Inventory items. These requests have been made by various state agencies, newspaper and television reporters, and private citizens. Also, HWRIC frequently uses the Inventory to respond to real estate transfer requests. During certain real estate transfers, a search is conducted to determine if waste disposal sites are on or in the vicinity of properties targeted for sale or development.

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Table 3. Distribution of information from the Inventory.

<u>ITEM</u>	<u>NUMBER OF REQUESTS</u>
FY'87 Reports (Mehnert and Keefer, 1988)	27
FY'86 Reports (Dixon et al., 1986)	20
Data from the Inventory	42
General Information	20

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### CHAPTER 3. STATUS OF THE INVENTORY

The total number of records in the landfill file has increased from 2946 in FY'87 to 3406 as of January 12, 1989. Data for new sites were obtained from both NIPC (288 sites) and IEPA (172 sites). As seen in Table 4, which shows the distribution of records from the landfill file on a county basis, the counties with the largest number of sites are Cook (337 sites), Winnebago (210), and Lake (162). Warren and Hamilton counties each had the fewest sites, two. Also on Table 4, it can be seen that in Cook County the primary source of data for 180 sites was IEPA and the source for the remaining 157 sites was other sources. At these 337 sites, there are 321 landfills, 11 surface impoundments, 3 land application sites, 9 secured container facilities, and 9 open dumps. Note that one site may have multiple methods of disposal.

Table 5 provides a summary of data from the landfill file with respect to source of information, type of disposal, and type of waste. From Table 5, less than 7% (220 of 3406) of the sites are known to contain radioactive, hazardous solid and/or hazardous liquid wastes. In addition, there is a considerable amount of uncertainty regarding type of waste disposed-- the type of waste is not known for all or portions of approximately 23% (768 of 3406) of the sites.

Table 6 shows the comparison of the quantity of data within the landfill file of the Landfill Inventory for FY'87 and FY'88. The

Table 4. Tabulation of data from the landfill file of the Inventory as of January 12, 1989.

County	Number of sites	Sources of information		Method of disposal					Type of waste			
				Land- fills	Surface impound- ments	Land appli- cation	Secured con- tainers	Open dumps	Haz. solid	Haz. liquid	Radio- active	Unknown
		IEPA	Other									
Adams	39	37	2	36	0	0	0	3	2	4	0	3
Alexander	10	10	0	10	0	0	0	0	0	0	0	7
Bond	12	12	0	12	0	0	1	0	0	0	0	5
Boone	10	10	0	8	1	1	0	0	0	1	0	4
Brown	18	16	2	17	0	0	0	3	0	0	0	2
Bureau	20	19	1	20	0	0	1	0	0	2	1	8
Calhoun	9	9	0	5	0	0	0	3	0	0	0	4
Carroll	32	17	15	24	2	0	0	6	0	0	0	13
Cass	21	21	0	14	0	0	0	7	0	1	0	11
Champaign	36	31	5	31	0	0	1	5	0	0	0	5
Christian	29	21	8	22	1	0	0	6	1	1	0	11
Clark	15	15	0	14	0	0	1	0	1	1	0	4
Clay	13	13	0	11	1	1	0	1	0	0	0	6
Clinton	17	17	0	15	0	0	0	2	0	0	0	8
Coles	37	34	3	32	0	0	0	3	1	0	0	4
Cook	337	180	157	321	11	3	9	9	7	17	1	43
Crawford	18	18	0	16	2	2	2	0	1	2	0	10
Cumberland	5	5	0	5	0	0	0	0	0	0	0	1
De Kalb	24	24	0	23	1	0	0	0	1	0	0	14
De Witt	30	20	10	29	1	0	0	0	0	1	0	1
Douglas	15	15	0	13	1	0	0	1	0	1	0	1
Du Page	76	48	28	65	2	1	0	8	1	2	5	21
Edgar	9	9	0	9	0	0	0	0	0	0	0	1
Edwards	5	5	0	5	0	0	0	0	0	0	0	1
Effingham	11	11	0	11	0	0	0	0	0	0	0	3
Fayette	15	15	0	13	2	0	0	0	2	3	0	6
Ford	10	10	0	8	0	1	0	1	0	0	0	1
Franklin	13	13	0	13	0	0	0	0	0	0	0	8
Fulton	24	24	0	24	0	0	1	0	0	1	0	1
Gallatin	6	6	0	6	0	0	0	0	0	0	0	3
Greene	11	10	1	10	0	0	0	1	0	1	0	1
Grundy	8	8	0	7	1	0	0	1	0	1	0	2
Hamilton	2	2	0	2	0	0	0	0	0	0	0	0
Hancock	26	26	0	26	0	2	0	0	0	1	0	1

continued on next page

Table 4. Continued

County	Number of sites	Sources of information		Method of disposal					Type of waste			
				Land-fills	Surface impoundments	Land application	Secured containers	Open dumps	Haz. solid	Haz. liquid	Radio-active	Unknown
		IEPA	Other									
Hardin	7	7	0	7	0	0	0	0	0	0	0	5
Henderson	5	5	0	4	0	0	0	1	0	0	0	0
Henry	29	29	0	24	1	1	4	1	1	3	0	10
Iroquois	20	20	0	20	0	0	0	0	0	0	0	0
Jackson	22	22	0	21	0	0	1	0	0	1	0	9
Jasper	7	7	0	6	1	0	0	1	0	0	0	4
Jefferson	19	19	0	19	0	0	0	0	0	0	0	9
Jersey	15	15	0	15	0	0	0	0	0	0	0	1
Jo Daviess	28	28	0	24	0	1	2	2	1	2	0	7
Johnson	11	11	0	11	0	0	0	0	0	0	0	5
Kane	85	67	18	81	0	1	0	1	2	2	1	13
Kankakee	23	23	0	19	0	1	0	2	1	0	0	9
Kendall	12	12	0	11	0	0	0	1	1	1	0	1
Knox	19	19	0	16	0	0	2	3	2	1	0	2
Lake	162	74	88	125	0	1	2	21	3	3	0	21
La Salle	68	67	1	64	0	1	1	3	2	1	1	23
Lawrence	12	7	5	6	0	1	0	4	1	1	0	5
Lee	28	28	0	28	0	0	0	0	0	0	0	3
Livingston	29	25	4	27	0	0	0	2	0	0	0	3
Logan	12	12	0	10	0	0	0	2	0	0	0	1
McDonough	16	16	0	16	0	0	0	0	0	0	0	0
McHenry	83	56	27	78	0	3	0	1	1	5	0	24
McLean	38	38	0	34	1	0	2	1	0	0	0	1
Macon	67	67	0	67	0	0	0	0	1	1	0	1
Macoupin	42	42	0	40	0	0	1	2	3	3	0	7
Madison	80	79	1	62	5	0	4	13	5	8	0	34
Marion	31	31	0	28	1	0	0	2	0	0	0	10
Marshall	13	11	2	11	0	0	0	2	0	0	0	2
Mason	11	11	0	9	0	1	1	0	0	0	0	2
Massac	14	14	0	12	1	0	0	1	2	1	0	8
Menard	9	9	0	9	0	0	0	0	0	0	0	0
Mercer	10	10	0	10	0	0	0	0	0	0	0	0
Monroe	17	17	0	16	0	0	0	1	1	1	0	7
Montgomery	38	38	0	38	0	0	0	0	0	0	0	2

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Table 4. Continued

County	Number of sites	Sources of information		Method of disposal					Type of waste			
				Land-fills	Surface impoundments	Land application	Secured containers	Open dumps	Haz. solid	Haz. liquid	Radio-active	Unknown
		IEPA	Other									
Morgan	43	41	2	43	0	0	0	1	0	0	0	7
Moultrie	6	6	0	6	0	0	0	0	0	0	0	1
Ogle	41	41	0	39	0	0	1	2	3	2	0	19
Peoria	51	49	2	42	1	1	0	5	1	2	0	5
Perry	9	9	0	8	0	0	0	1	0	0	0	4
Piatt	8	4	4	4	0	0	0	4	0	0	0	3
Pike	39	39	0	39	0	0	0	0	0	0	0	4
Pope	14	14	0	14	0	0	0	0	0	0	0	5
Pulaski	19	19	0	19	0	0	0	0	0	0	0	11
Putnam	7	7	0	6	1	0	0	0	0	1	0	2
Randolph	29	29	0	28	0	0	0	1	0	0	0	11
Richland	11	9	2	11	0	0	0	0	0	0	0	6
Rock Island	65	65	0	62	0	0	0	2	1	0	0	20
St. Clair	152	152	0	131	2	0	3	19	8	7	0	54
Saline	17	17	0	17	0	0	0	0	0	0	0	6
Sangamon	100	100	0	94	0	0	0	5	6	6	0	9
Schuyler	7	7	0	6	0	0	0	1	0	0	0	1
Scott	33	33	0	31	0	0	0	2	0	0	0	3
Shelby	15	15	0	12	0	0	0	2	0	0	0	2
Stark	8	8	0	8	0	0	0	0	0	0	0	0
Stephenson	25	25	0	23	2	0	1	0	0	2	0	12
Tazewell	91	89	2	77	0	2	0	11	1	2	0	13
Union	13	13	0	12	0	2	0	1	0	2	0	4
Vermilion	68	68	0	60	1	3	0	4	1	4	0	5
Wabash	10	10	0	10	0	0	0	0	0	0	0	2
Warren	2	2	0	2	0	0	0	0	0	0	0	0
Washington	10	10	0	10	0	0	0	0	0	0	0	4
Wayne	10	10	0	10	0	0	0	0	0	0	0	3
White	5	5	0	5	0	0	0	0	0	0	0	2
Whiteside	36	36	0	33	0	1	1	2	3	2	0	17
Will	116	84	32	107	5	4	1	4	8	10	0	21
Williamson	71	69	2	68	0	0	1	2	2	1	0	21
Winnebago	210	85	125	178	4	15	1	10	7	10	0	49
Woodford	20	20	0	17	0	1	0	2	1	0	0	0

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Table 5. Summary of data from the landfill file of the Inventory as of January 12, 1989.

Total number of sites:		3406	
Primary source of data:	IEPA	2857	
(number of sites)	Other agencies	549	
Type of disposal sites <sup>1</sup> :	Landfill	3077	-
	Open dump	208	
	Surface impoundment	52	
	Land application	51	
	Secured containers	45	
	Unknown	34	
Type of waste in disposal sites:			
	Radioactive	9	
	Hazardous solid	86	
	Hazardous liquid	125	
	Special <sup>2</sup>	78	
	General	885	
	Industrial	91	
	Sewage sludge	107	
	Unknown	768	

<sup>1</sup> Multiple methods are used at some sites

<sup>2</sup> Some hazardous wastes may be included.

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records for FY'87 were tallied on June 23, 1987, while the records for FY'88 were tallied January 12, 1989. "Number of non-blank fields" indicates the number of records which were not blank for that item. For example, USEPA number for FY'88 had 76 non-blank fields, i.e., 76 records in the Inventory had a USEPA number. No data for USEPA number were available for the remaining records, and those fields were left blank.

One item of particular interest is "illegal site". In FY'87, the number of non-blank fields for this item was 2748, while in FY'88 this number decreased to 864. This apparent reduction is due to a change in

Table 6. Number of records in the landfill file of the Inventory on an item-by-item basis for FY'87 and FY'88.

ITEM	NUMBER OF NON-BLANK FIELDS	
	FY'87	FY'88
Total records	2946	3406
IEPA number	2946	3406
USEPA number	84	76
Site name	2915	3375
Provisional number	280	568
County	2849	3378
City	2925	3391
Latitude	2572	2695
Longitude	2559	2695
Principal meridian	1913	2365
Township	2945	3306
Range	2762	3191
Section	2739	3170
Quarter section 1	492	1306
Quarter section 2	430	706
Quarter section 3	74	77
Quarter section 4	76	69
X	2743	3124
Y	2743	3124
Owner	2906	3089
Operator	2895	3077
Size	1514	1538
Source- IEPA	2670	2860
Source- ISGS	13	13
Source- PCB	6	6
Source- IDM&M	8	8
Source- DPH	15	16
Source- Local Health Dept.	137	219
Source- Agency	0	619
Source- Other	0	187
Type of disposal	2908	3372
Data at HWRIC	2943	2938
Data at IEPA	2943	2938
Data at ISGS	2943	2938
Data at other	2943	2938
General waste	895	895
Municipal waste	109	108
Septic waste	42	42
Animal waste	25	25
Pathogenic waste	16	16
Industrial waste	102	102
Foundry sand	29	28
Incinerator ash	52	52
Slag	25	25

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Table 6. Continued

ITEM	NUMBER OF NON-BLANK FIELDS	
	FY'87	FY'88
Hazardous solids	68	96
Hazardous liquids	121	135
Radioactive waste	20	20
Demolition debris	609	615
Concrete	139	139
Landscaping	125	125
Oil field brine	14	14
Special waste	83	90
Nonhazardous	2713	2794
Other type of waste	154	158
Unknown waste	730	779
Operational status	2104	2169
Permit status	1960	2026
Permit date	372	1317
Date opened	630	630
Date closed	1328	1323
CERCLA site	114	102
RCRA site	56	51
Groundwater monitoring	1437	1506
Former disposal site	25	25
Illegal site	2748	864
Date discovered	764	900
Date cleaned	95	104
Comment 1	721	875
Comment 2	283	292
Site report available	86	86
Site plans available	329	329
Operating records available	10	10
Monitoring records available	280	280
Other records available	275	275
Legal actions taken	34	34
Impoundment records available	3	3
Leachate collection	36	121
Liner material	413	437
Offsite waste	137	261
Size fill	1866	1561

the field filling protocol. In FY'87, responses to "illegal sites" contained "Y" (yes) or "N" (no). In FY'88, the "N" responses were deleted, making the field filling protocol consistent with the protocol of other fields.



Figures 2 through 10 show the geographic distribution of the data from the landfill file of the Inventory. Data are plotted using the XY (Lambert) coordinates; however, 282 records were not plotted due to the lack of XY coordinates. For instance, there are nine sites which contain radioactive waste, but only eight are plotted on Figure 7

Figure 2 All known waste disposal sites Included are active and inactive "dumps", landfills, land application sites, and surface impoundments

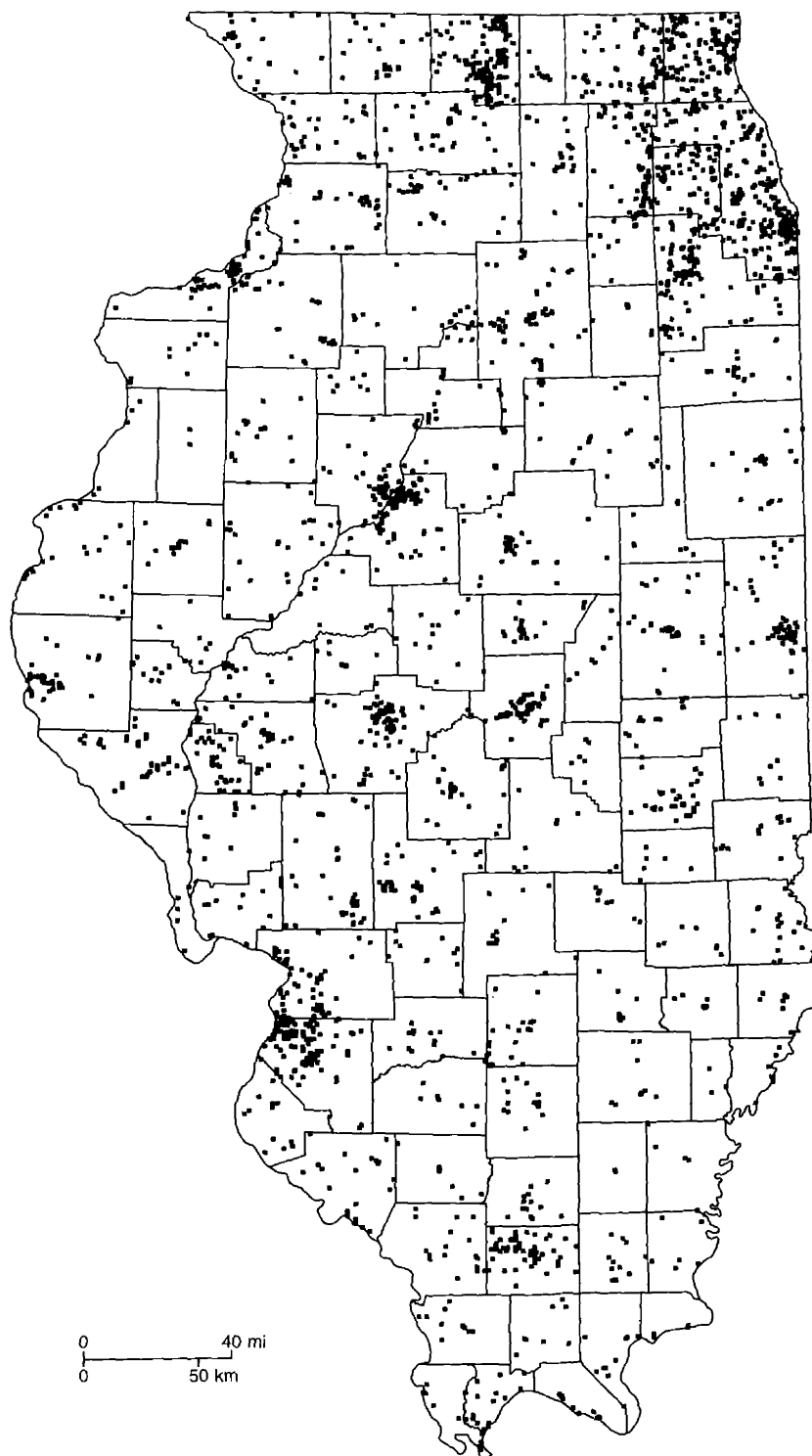


Figure 3 Land burial disposal sites Included are active and inactive "dumps" and landfills

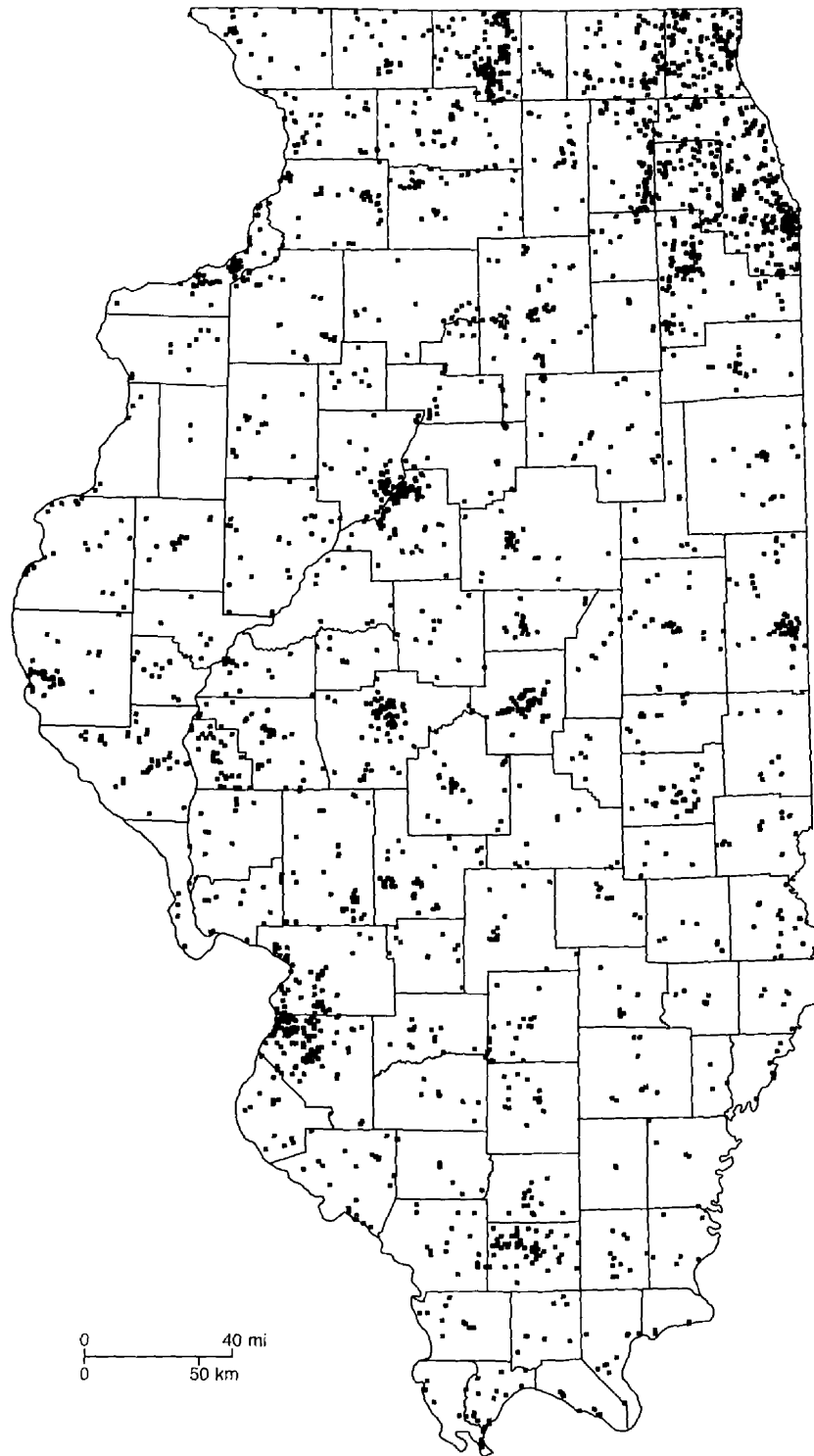


Figure 4. Surface impoundments used for waste disposal

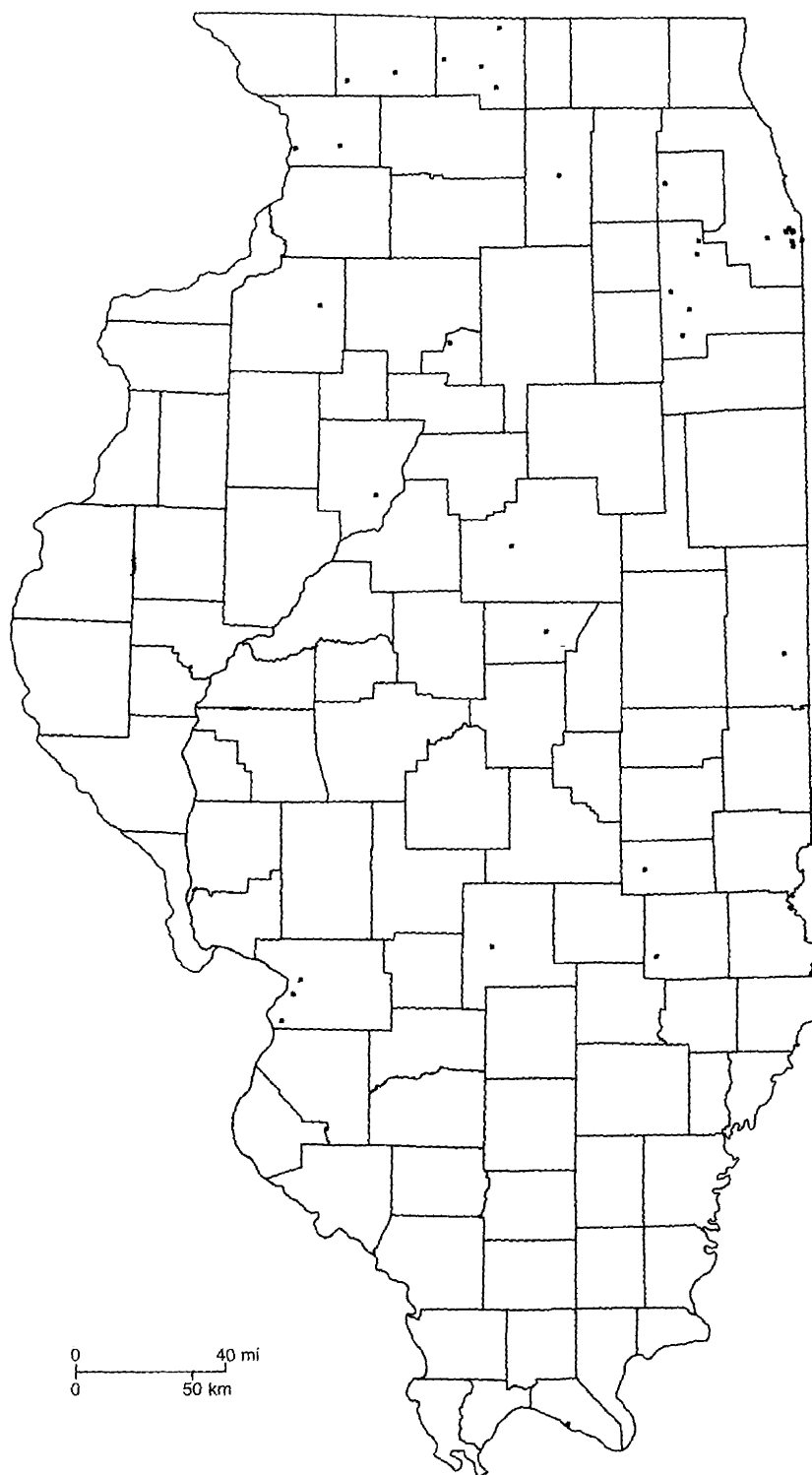


Figure 5 Disposal sites where land application of wastes was conducted



Figure 6. Disposal sites with hazardous wastes

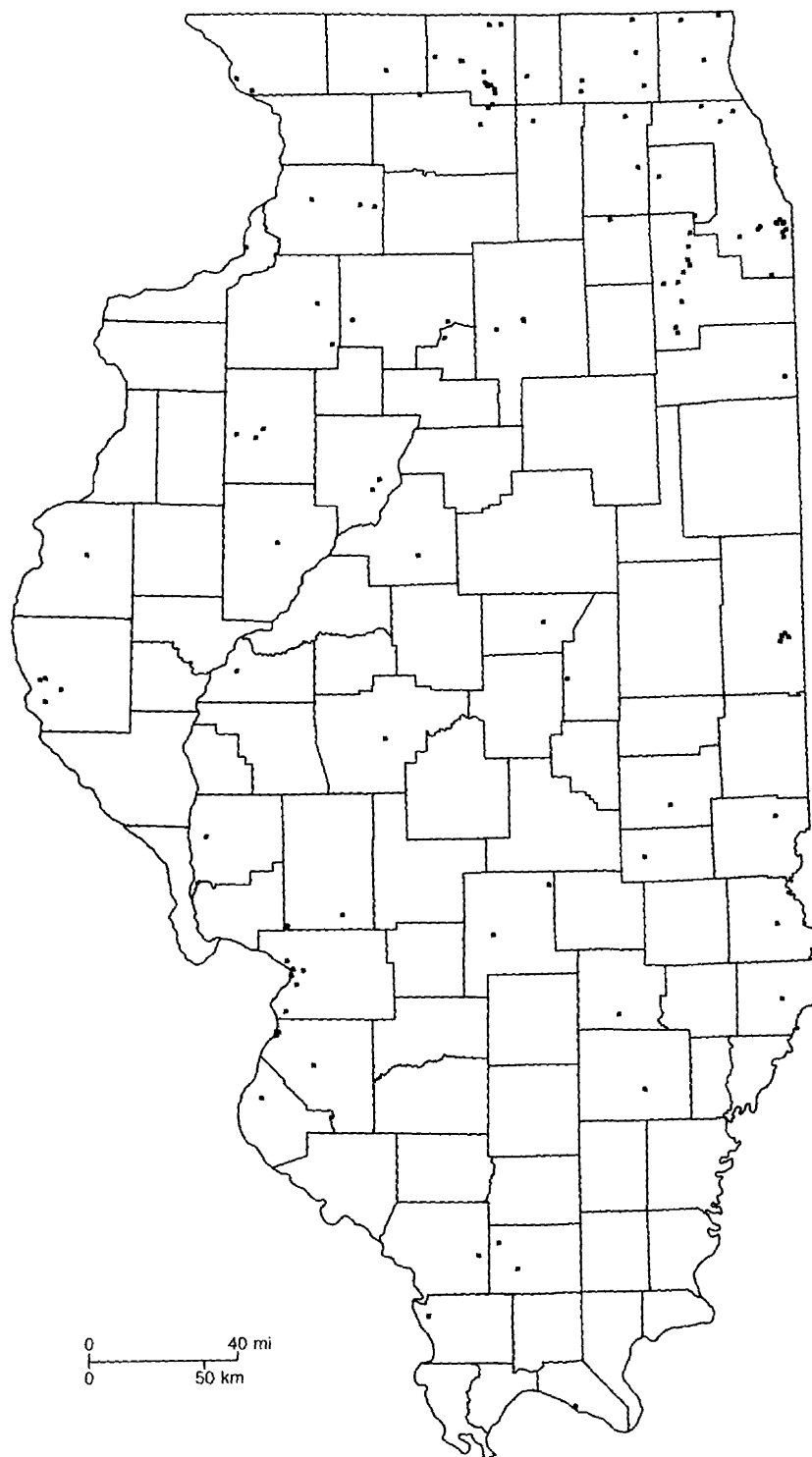


Figure 7. Radioactive waste disposal sites



Figure 8. Active disposal sites. Included are landfills, surface impoundments, and land application sites. Sanitary landfills are distinguished from all others (hazardous, special, etc ) No determination of operational status could be made for 1246 sites because of lack of information. Most of these sites are illegal dumps and were assumed to be inactive

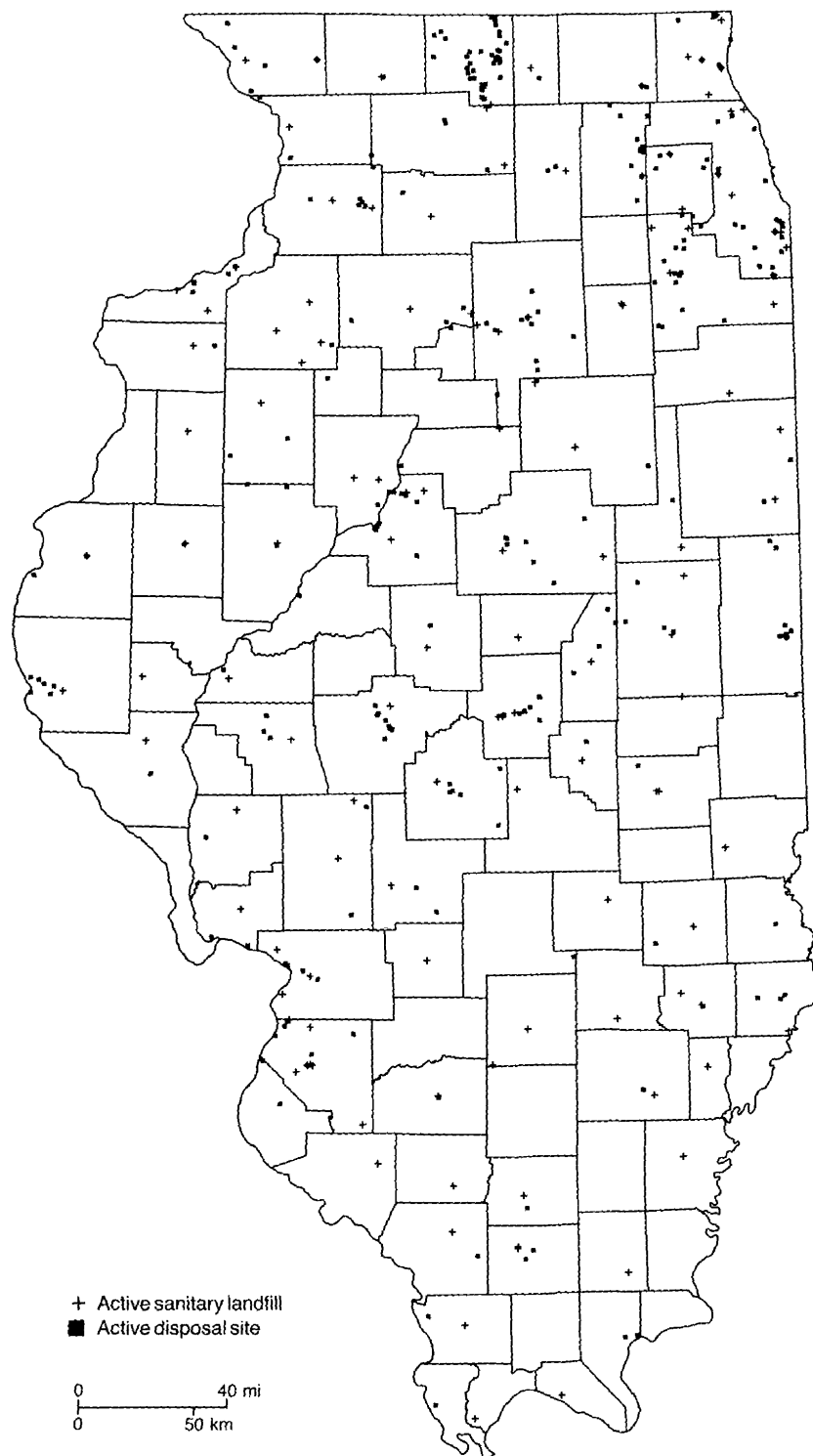




Figure 9 Remedial action disposal sites Sites shown include those **disposal** sites undergoing or scheduled to undergo remediation under one of the following programs: NPL, Proposed NPL, SRAPL, or IHWRP Not all remedial action sites are mapped here, only those where waste disposal was conducted

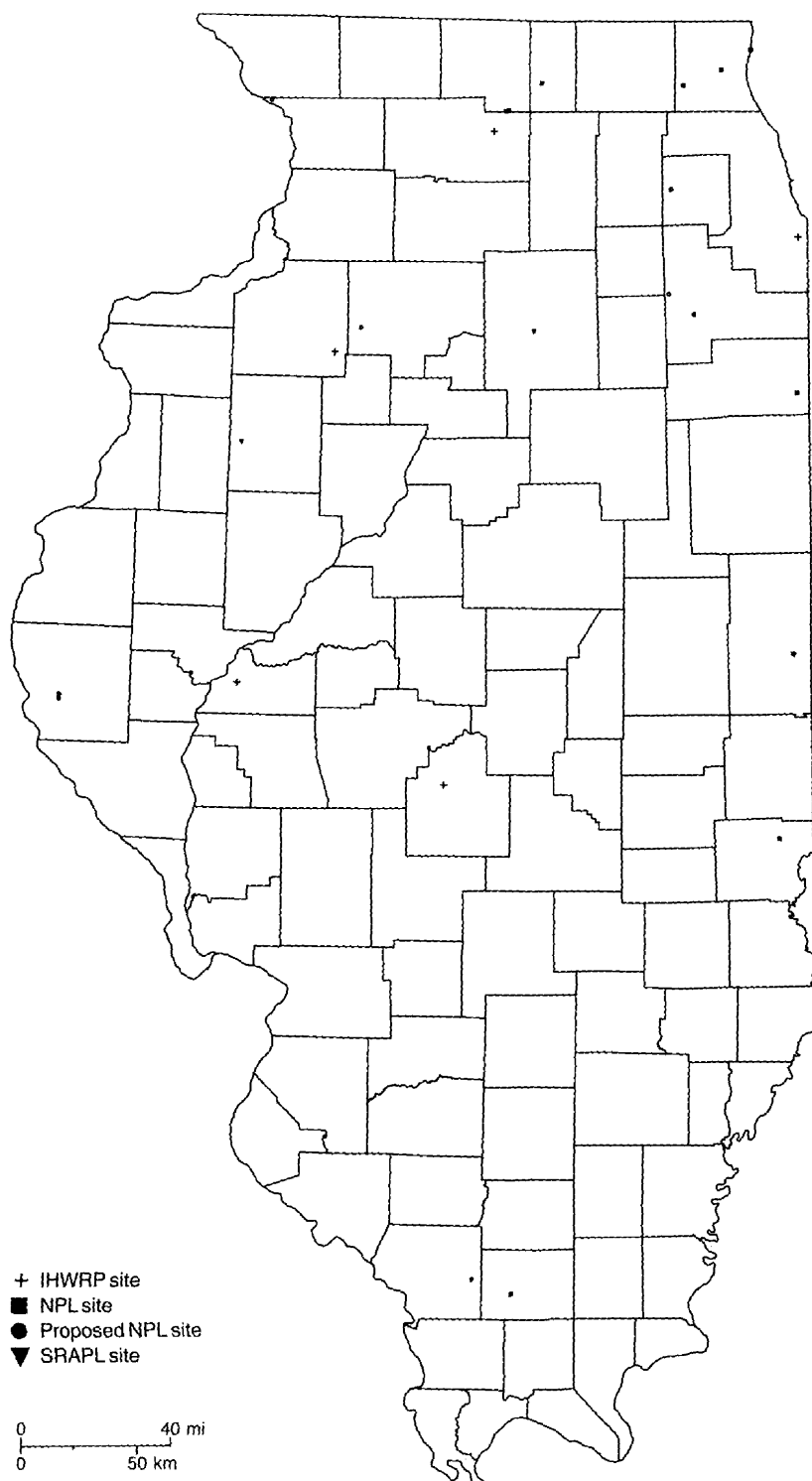
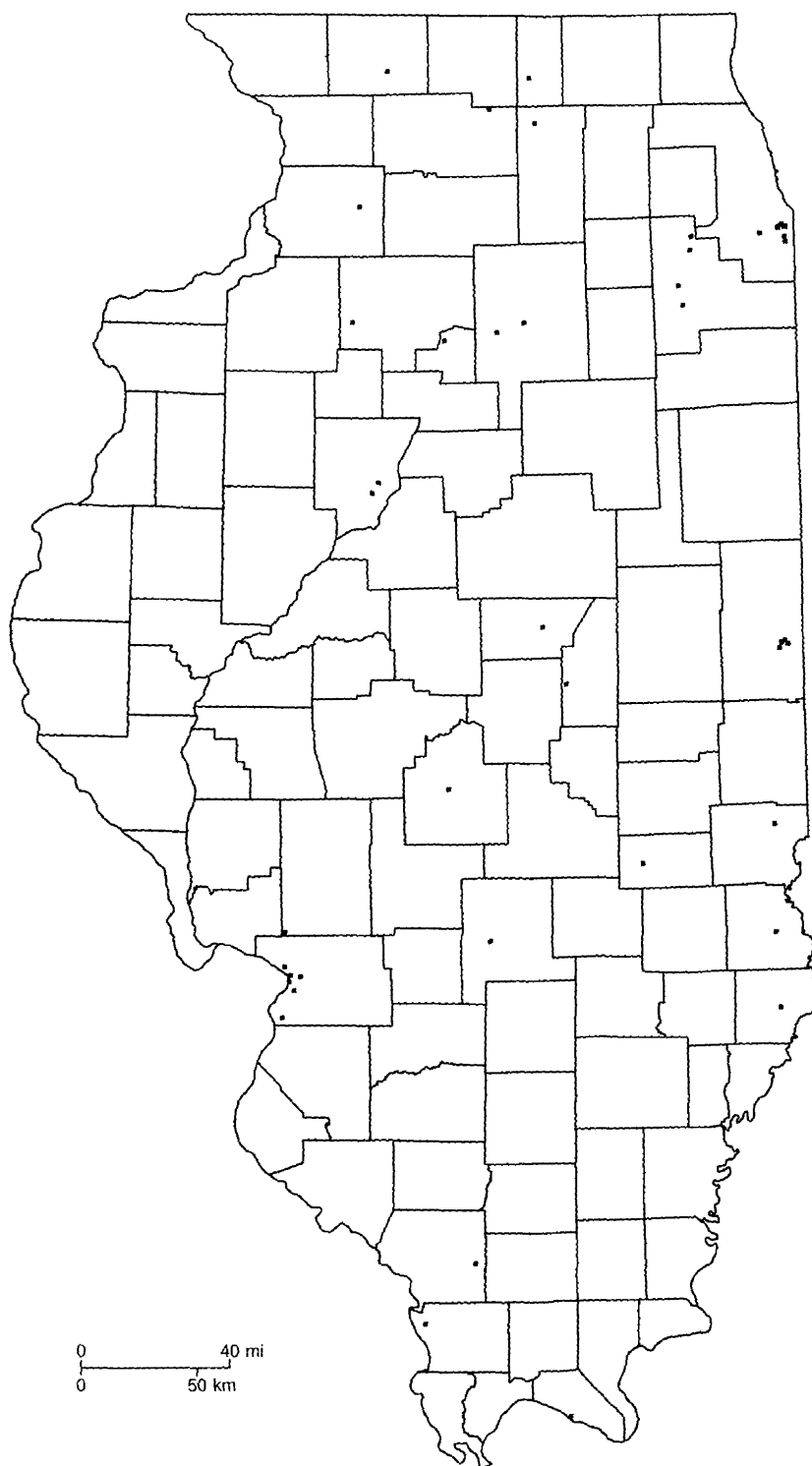


Figure 10 Sites that conducted hazardous waste disposal activity and notified USEPA under RCRA Part A Active and inactive sites are shown





## CHAPTER 4. FUTURE NEEDS

The following tasks should be undertaken to improve the quality of data within the landfill file of the Inventory:

Maintain the Inventory. The data within the Inventory must be updated on a regular basis. Updating the Inventory involves adding data for "new" sites and replacing existing data with more current data. Annual updating of the Inventory is preferred; however, if research funds are not available annually, the Inventory should be updated biannually. The utility of the Inventory will suffer if updating is not undertaken at least biannually.

Improve update data. The quality of data used to update the Inventory should be improved. IEPA will remain an excellent source of data for updating the Inventory; however, improvements in the special waste handlers list can be made such as providing data for existing fields where it is lacking. For example, entering the size of fill area for landfills or the type of waste disposed for all types of sites on the special waste handlers list would improve the Inventory. The data for RCRA sites and remedial action sites should be maintained. Although data fields for tracking these sites are included in the special waste handlers list, these fields are frequently blank or outdated. In addition, a significant quantity of data may become available from surveys similar to the NIPC survey in northeastern Illinois. Similar surveys are recommended for other areas of Illinois having long histories of industrial activity, especially Madison and St. Clair Counties.

Better coordination of IEPA data sources. Currently, data are

obtained from personal contacts in several offices within IEPA. In the future, formalizing data transfer with IEPA would facilitate updating the Inventory.

Acquire additional information. A possible source of information is solid waste disposal planning reports generally prepared by consulting engineers or planning commissions. Another source of information is the legal records for sites undergoing or scheduled for remedial action under the federal or state remedial action programs.

Quality assurance/verification of existing data. Work is needed to continue to improve the accuracy and completeness of the data within the Inventory. HWRIC has verified locational information in select areas of the state. This work should continue. Another segment of data, disposal practices and type of waste disposed, should be given high priority for data verification.

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